

9`hYfb`VYgcf[h.`Gd]Y`d`Uhn`]b`?`cb`_`Yb` Xi`fW`7`cb`hU]bYf`Y]b[YgW`f`Å`b`_`h`

9]b`7`cb`hU]bYf`Ui`ZXYa`GWi`c`ZXYf`; fi`bXgWi`Y`?`cb`_`Yb`
gcf[h`Z0f`k`Yb][Yf`D`Uhn`ni`a`Gd]Y`Yb`i`bX`j`Yf`Åf[Yfh`9`hYfb`"

?ca`a`YbXY`K`cW`Y`k`]fX`XYf`GWi`c`ZXYf`; fi`bXgWi`Y`]b`?`cb`_`Yb`
k`]YXYf`VY`YVh`gY]bž`k`Å`fYbX`X]Y`GWi`0`Yf`g]W`Ui`Z`XUg`bYi`Y`
GWi`U`f`Z`Yi`Yb`"8`cW`X]Y`fYi`XY`k`]fX`Xi`fW`Y]bY`HUhgUW`Y`
[Yhf0Vh`9]b`7`cb`hU]bYf`U`h`Y]bYb`HY`]`XYg`<`cZg`VYgY`h`ž`k`Ug`XYb`
j`Yf`Z0[VUfYb`D`Uhn`Z0f`X]Y`?]bXYf`ghUf`_`fYXi`n]Yfh`"8`]YgY`G]hi`Uh]cb`
U`h`j`Yf`Åf[Yfi`b[`VY`]9`hYfb`Ui`g[Y`0`ghž`]bgVYgcbXYfY`VY`]Y]bYa`
j`UhYfž`XYf`X]Y`j`Yf`Ub`hk`cfh]W`Yb`_`f]h]g]Yfh`i`bX`U`g`j`Yfg`Åi`a`h`
Ubg]Y`h`ž`k`Ug`a`Ub`VYggYf`Å`h`h`Y`d`Ub`Yb`_`0`b`Yb`"

6YfY]hg`gY]h`a`Y`fYfYb`U`fYb`]gh`_`Ufž`XUgg`X]Y`; fi`bXgWi`Y`
?`cb`_`Yb`Y]bYb`ni`g`Å`h`]W`Yb`?`UggYbgUU`VYb`0h][hž`i`a`XYb`
ghY][YbXYb`GWi`0`YfnU`Yb`[YfYW`h`ni`k`YfXYb`"8`cW`h`f`c`h`X]YgYf`
9f`_`Yb`b`h`b]g`g`W`Y]bYb`b`c`h`k`Yb`X][Y`A`U`»`b`U`a`Yb`V]g`Yf`b]W`h`i]b`
Ui`gfY]W`Yb`XYa`A`U`»`Y`Yf[f]ZZYb`k`cfXYb`ni`gY]b`"8`U`b`b`m`
GWi`a`Y`n`Yfž`Y]b`VYgcf[hYf`j`UhYf`Ui`g`XYf`; Ya`Y]bXYž`U`h`X]Yg`
Ub[YgdfcW`Yb`i`bX`VY`h`c`b`hž`XUgg`X]Y`G]hi`Uh]cb`b]W`h`b`i`f`
i`bdfU`_`h]gW`ž`g`c`b`XYfb`Ui`W`b]W`h`b`UW`j`c`n]Y`VUf`]gh`"

9]b`7`cb`hU]bYfž`j`]Y`Y`:`fU[Yb`

8Yf`7`cb`hU]bYfž`XYf`bi`b`Ui`ZXYa`GWi`c`Z`ghY`hž`g`c`U`g`
dfcj]gcf]gW`Y`@0gi`b[`X]YbYbž`i`a`D`Uhn`Z0f`Y]bY`bYi`Y`
?`UggYbn]a`a`Yf`ni`g`W`UZZYb`"8`]Yg`VYXYi`hYh`Y`X`c`W`ž`XUgg`k`Yb][Yf`
F`Ui`a`Z0f`X]Y`GWi`0`Yf`V`Y]Vhž`i`a`g]W`ni`VYk`Y[Yb`i`bX`ni`gd]Y`Yb`
?]bXYf`VYb`0h][Yb`D`Uhnž`i`a`U`_`h]j`ni`gY]bž`i`bX`[Yf`UXY`XUg`Gd]Y`
]gh`Y]bY`Yb`hgW`Y]XYbXY`?`ca`d`c`b`Y`b`h`Y`k`Å`fYbX`XYf`DUi`gYb`"8`]Y`

9]bgWxfÀb_i b['XYg'Gd]Y`fUi a g`_ÒbbhY`X]Y : fY]nY]h[YghU`hi b[Yf\YV`]W\`VYY]bhfÀW h][Yb`i bX`gca]h`Ui W\`X]Y`Gh]a a i b[`XYf ?]bXYf`bY[Uh]j `VYY]bZi ggYb"

8]Y`GW i `Y`\Uh]b`XYf`J Yf[Ub[Yb\Y]h]a a Yf`k]YXYf`VYhc`bhž`XUgg X]Y`Bchk YbX][_Y]h`Y]bYg`ni gÀhn`]WYb`FUi a g`XfÀb[h" `XcW gWY]bh`X]Y`i a gYhni b[`XYg`bchk YbX][Yb`Dfc`Y`_hYg`\]bhYf`XYb 9fk Ufhi b[Yb`ni fØW`ni V`Y]VYb" `8]Y : fU[Yž`X]Y`g]W\`9`hYfb`i bX GW`Ø`Yf`ghY`Ybž`]ghž`k Ufi a `Yg`gc`Ub[Y`[YXUi Yfh`\Uhž`X]YgY DfcV`Ya Y`ni `ÒgYb" `8]Y`i bni fY]WYbXY`D`Ubi b[`i bX`?ccfX]bUh]cb XYf`ni ghÀbX][Yb`GhY`Yb`\Uh`bi b`ni `X]YgYf`i b[`ØW`_]WYb`i bX Àf[Yf`]WYb`G]hi Uh]cb`[YZØ`fh"

J YfUbhk cfhi b[`XYf`J Yfk U`hi b[

8Yf`GhUbXcfh`XYg`7cbhU]bYfg`k]fX`j cb`j]Y`Yb`U`g: Y`\Yf`XYf J Yfk U`hi b[`Ub[YgY\Yb" `9]b`J UhYf`Ài » Yfh`g]W\`_`Uf`i bX`XYi h]W\` . 9g`]gh`VYXUi Yf`]W\`ž`XUgg`Yg`gc`k Y]h`_ca a Yb`a i gghY" `A Ub k i gghY`gY]h`X`fYbž`XUgg`k]f`a Y`\f`D`Um`VYb`Øh][Ybž`i bX`XYbbcW \Uh`a Ub`_Y]bY`[YY][bYhY`@Øgi b[`[YZi bXYb" `8]YgY`?f]h]_`\`Zh`Ui Z VYgcbXYfg`XYi h]WY`K Y]gYž`XUg`; YZØ`\`XYf`9bhh`Ài gW i b[`i bX XYg` : fi ghY`g`j]Y`Yf`9`hYfb`Ui gni XfØW`Ybž`X]Y`g]W\`i a `X]Y 6YXØfZb]ggY`]\fYf`?]bXYf`gc f[Yb"

Ni gÀhn`]W\`ni `XYb`dfU`_h]gWYb`DfcV`Ya Ybž`X]Y`XYf`7cbhU]bYf`a]h g]W\`Vf]b[hž`V`Y]Vh`Ui W\`X]Y : fU[Y`cZZYbž`k]Y`Ub[Y`X]YgY`@Øgi b[Ui ZfYW`hYf`U`hYb`k YfXYb`gc`""?i bghfUi a ž`Gdcfh`i bX`UbXYfY GW i `U`_h]j]hÀhYb`VYb`Øh][Yb`FUi a " `8 Ug: Y`\Yb`X]YgYf A Ò[`]W\`_Y]hYb`VYY]bZi ggh`b]W\`h`bi f`XYb`i bhYff]W\`hž`gcbXYfb`Ui W XUg`[YgUa hY`GW i `_]a U" `@Ub[Zf]gh][`[YgY\Ybž`k]fX`Yg`bcW k]W h][Yf`gY]bž`Y]bY`bUW\`U`h][Y`@Øgi b[`ni `Z]bXYbž`X]Y`gck c\` XYb`6YXØfZb]ggYb`XYf`GW`Ø`Yf`[YfYW`h`k]fX`U`g`Ui W\`Y]bYb [YY][bYhYb`GW i `fUi a `V]YhYh"

8]Y`G]hi Uh]cb`Ub`XYf` ; fi bXgW i `Y`?cb`_Yb`k]fZi: fU[Yb`Ui Z` J YfÀbXYfi b[`]gh`b`Øh][ž`YXcW`ghY`h`g]W\`X]Y : fU[Yž`k]Y`X]YgY J YfÀbXYfi b[Yb`hUhgÀW`]W\`i a [YgYhnh`k YfXYb`_ÒbbYbž`i a [Y[Ybk Àfh][Y`GW k]Yf][_Y]hYb`ni `ØVYfk]bXYb" `9g`[`]h`Yhnhž`Y]bYb

K Y['ni 'Z]bXYbž'XYf'gck c\`X]Y'FUi a dfcV`Ya Uh]_`Ògh'U`g'Ui W
XUZØf'gcf[hž'XUgg'X]Y'GWØ'Yf'cdh]a U`Y'6YX]b[i b[Yb'ZØf']\f
@YfbYb'i bX'Gd]Y`Yb`Yf\U`hYb"

9]bY`Xf]b[YbXY`< YfUi gZcfXYfi b[

8]Y'G]hi Uh]cb`Ub`XYf'; fi bXgWxi `Y`_ÒbbhY`U`g'6Y]gd]Y`ZØf`Y]bYb
VfY]hYfYb`HfYbX`]b'6]Xi b[gY]bf]Wxi b[Yb`X]YbYbž'X]Y`a]h
À\b`]WYb`DfcV`Ya Yb`_Àa dZYb`i bX`cZh`\]bhYf`XYb`5bZcfXYfi b[Yb
ni fØW_V`Y]VYb"8 Ug'9f_YbbYb`i bX`5bgdfYWYb`X]YgYf`H\Ya Yb`]gh
YbhgWY]XYbXž'i a`X]Y`E`i`U`h`h`X`Yf`6]Xi b[`b]W`h`ni`[`Y`Z`A`\f`XYb"
8U\Yf`V`Y]Vh`UVni k UfhYbž'k]Y`X]Y`J`Yf`Ub`hk`cfh]WYb`]b`?`cb`_Yb`Ui`Z
X]Y`VYghY`YbXYb`<YfUi gZcfXYfi b[Yb`fYU[]YfYb`i bX`k`Y`WY
ni`_ØbZh][Yb`D`Ubi b[Yb`Ui`Z[YghY`h`k`YfXYbž'i a`X]Y`h`h`[`fUh]cb
bYi`Yf`F`Ài`a`Y`ni`Yfa`Ò[`]WYb`i`bX`[`Y]W`nY]h][`XYb`6YXØfZb]ggY
XYf`GWØ'Yf'[YfYW`h`ni`k`YfXYb"

?`cb`hYI`h`X`Yf`G`W`i`d`U`hn`_`b`U`dd`\`Y]h

8]Y'; fi bXgWxi `Y`?`cb`_Yb`g]Y`h`g]W`a`]h`Y]b`Yf`Ub`\U`hYbXYb
GWxi`d`U`hn`_`b`U`dd`\`Y]h`_`cb`Z`f`cb]Yf`hž'X]Y`b]W`h`bi`f`c`_U`ž`g`cb`XYfb
Ui`W`]b`j`]Y`Yb`Ub`XYfYb`F`Y[]cbYb`8Yi`hgW`Ub`Xg`Y]b`H\Ya`U`]gh" `h
XYb`Y`h`h`Yb`h`f`Yb`g]b`X`X]Y`9]bgWxi`i`b[`gnU`\`Yb`]b`j`]Y`Yb`G`h`X`h`Y`b
[`Y`gh]Y[`Yb`ž`k`Ug`Ui`Z`k`UW`g`Yb`XY`6Yj`Ò`_Yfi`b[`gnU`\`Yb`i`bX`Y]b`Y
ni`b`Y`a`Yb`XY`;`YVi`fhYb`f`UhY`ni`fØW`ni`ZØ`f`Yb`]gh"8]Yg`\U`h`X`Uni
[`Y`ZØ`f`hž'X`U`gg`G`W`i`Yb`c`Zh`b]W`h`[`Yb`Ø[`Yb`X`D`U`hn`ZØf`X]Y`b`Yi`Yb
GWØ'Yf`V]YhYb`_ÒbbYb"J]Y`Y`?`ca`a`i`b`Yb`ghY`Yb`]c`f`XYf
<YfUi gZcfXYfi b[ž[YY][bYhY`@Øgi b[Yb`ni`Z]bXYbž'i a`Yb`hk`Y`XYf
VYghY`YbXY`GWxi`Yb`ni`Yfk`Y]hYfb`c`XYf`b`Yi`Y`GWxi`[`YV`Ài`XY`ni
Yff]W`h`Yb"

9]b`k`Y]hYfYf`5gdY`hž'XYf`X]Y`G]hi Uh]cb`j`YfgW`Àf`Zhž`]gh`XYf
XYa`c[`fU`Z]gW`Y`K`Ub`XY`]b`_`À`b`X`]W`Yb`;`YV]YhYbž'XYf`k`Yb][`Yf
GWxi`gh`Ub`X`c`fhY`ni`f`i`c`[`Y`\`U`h"6Y]"[`Y]W`nY]h][`Yf`Ni`k`Ub`XYfi`b[`]b
gh`X`h]gW`Y`;`YV]YhY`_`ca`a`h`Yg`ni`Y]b`Ya`l`b[`Y]W`[`Yk`]W`h" `h
6Yni`[`Ui`Z`X]Y`;`fi`bXgWxi`Y`]b`?`cb`_Yb`_ÒbbhY`X]Y`G`h`Ub`X`c`fhk`U`\`
ZØf`XYb`7`cb`hU]b`Yfž'XYf`U`g`d`fcj`]gcf]gW`Yf`?`U`gg`Y`bg`UU`X]Yb`hž'Ui`W
Ui`Z`X]Y`g`W`b`Y`k`UW`g`Yb`XYb`5bZcfXYfi b[Yb`]b`XYf`F`Y[]cb

\]bk Y]gYbž'c\`bY`XUgg`Ui gfY]W\YbX`A U» bU\`a Yb`Yf[f]ZYb
k i fXYbž'i a `X]Y`ϕZfUghfi _hi f`Yb hgdFYW\YbX`Ubni dUggYb"

F YU_h]c bYb`XYf`9`hYfbgW\UZh

8]Y`9`hYfbž'k]Y`8 Ubbm'GW\ a Y`nYfž'XYf'g]W\`ØVYf`XYb`J Yf'i gh'XYg
Gd]Y`d`UhnYg`VYgW\k Yfhž`ZØ\`Yb`g]W\`cZi`ØVYf[Ub[Ybž'k Ybb`gc`W\Y
@Øgi b[Yb`i a [YgYhnh'k YfXYbž'c\`bY`XUgg`g]Y`]b`X]Y
9bhgW\Y]Xi b[gZ]bXi b[`Y]bVYnc[Yb`k YfXYb""8]Yg`ZØ\`fh'ni
J YfÅf[Yfi b[Yb`i bX`Y]bYa `; YZØ\`XYf`l bg]W\Yf\Y]h`ØVYf`X]Y
E i U`]hÅh'XYf`6]`Xi b[gi a [YVi b[`]\`fYf`?]bXYf"

8]Y`c b`]bY`i bX`cZZ]bY`Xi fW\ [YZØ\`fhYb`l a ZfU[Yb`nY][Ybž`XUgg
j]Y`Y`9`hYfb`VYgc f[h'g]bXž`XUgg`7cbhU]bYf`Øgi b[Yb`b]W\h`X]Y
VYghYb`@YfbVYX]b[i b[Yb`V]YhYb""9]bY`l a ZfU[Y`XYg`8Yi hgW\Yb
6]`Xi b[gfUhYg`Yf[UVž`XUgg`* + i `XYf`VYZfU[hYb`9`hYfb`XYf
A Y]bi b[`g]bXž`XUgg`Dfcj]gc f]Yb`Ub[Zf]gh][`b]W\h[YY][bYh'g]bXž
i a `XYb`6]`Xi b[gghUbXUfX`ni `U`hYb"

:]bUbna]Y`Y`l b hYfghØhni b[`i bX`d c`]h]gW\Y
A U» bU\`a Yb

ϕ j]Y`Yb`F Y[]cbYb`8Yi hgW\`UbXg`k i fXYb`:]bUbna]hY`
VYfY]h[YghY`hž'i a `XYb`6YXUfZUb`GW\i `fÅi a Yb`ni `XYW`Yb""8 Ug
6i bXYga]b]ghYf]i a `ZØf`6]`Xi b[`i bX`: cfgW\i b[`U]h'j YfgW\]YXYbY
: ØfXYfdfc[fUa`a Y`]bg`@YVYb`[Yfi ZYbž`X]Y`?ca`a i bYb
i bhYfghØhnyb`gc`Ybž`GW\i `Yb`ni `fYbcj]YfYb`cXYf`ni `Yfk Y]hYfb"
8YbbcW\`[]Vh'Yg`cZi`VØfc`_fU]gW\Y`<ØfXYbž`X]Y`Yg`XYb
; Ya Y]bXYb`YfgW\k YfYbž`gW\`bY`Ui ZX]Y`6YXUfZY`ni `fYU[]YfYb"

ϕ Y]bYf`U_hi Y`Yb`l bhYfgi W\i b[`XYg`8Yi hgW\Yb`GhÅXhY`! i bX
; Ya Y]bXYVi bXg`k i fXY`ZYgh[YghY`hž`XUgg`j]Y`Y`GhÅXhY`i bhYf
Yfbgh\UZhYb`<Ui g\U`hgdFcV`Ya Yb`Y]XYbž`X]Y`Yg`]\`bYb`_Ui a
Yf`Ui VYbž']b`X]Y`6]`Xi b[`ni `]bj Ygh]YfYb""8]Yg`\U`h'ni f': c`[Yž`XUgg
cZi`_i fnZf]gh][Y`@Øgi b[Yb`k]Y`XYf`9]bgUhn`j cb`7cbhU]bYfb`UbghY`Y
Y]bYg`Ub[Zf]gh][Ybž`bUW\`U`h][Yb`5bgUhnYg`j YfZc`[h'k YfXYb"
Gc`W\Y`A U» bU\`a Yb`_ØbbYb`nk Uf`gW\`bY`i a [YgYhnh'k YfXYbž
`YXcW\`ZY`\`hYg`\`Åi Z][`Ub`XYf`bØh][Yb`ϕZfUghfi _hi fž'i a `Y]b

cdh]a U`Yg`@Yfbi a Z`X`ni `gWUZZYb"

: Un]h

8]Y`DfcV`Ya Uh]_`fi bX`i a `X]Y`; fi bXgW`i `Y`?cb`_Yb`gd]Y[Y`h`Y]bY
k Y]h]j YfVfY]hYhY`<YfUi gZcfXYfi b[`]b`8Yi hgW`UbX`k]XYf.`8Yb
6YXUfZ`bUW`a Y`f`GW`i `fUi a `]b`Y]bYa `g]W`gW`bY``k UbXY`bXYb
6]`Xi b[ggmghYa ``9g`k]fX`YbhgW`Y]XYbX`gY]bž`gck c``X]Y
dc`]h]gW`Yb`9bhgW`Y]Xi b[ghfÀ[Yf`U`g`Ui W`X]Y`9`hYfb`]b`X]Y
D`Ubi b[`i bX`l a gYhni b[`j cb`A U»bU`a Yb`ni f`J YfVYggYfi b[`XYf
GW`i `fYggci fW`b`a]h`Y]bni VYn]Y`Yb``9]b`_ccdYfUh]j Yf`5bgUhn
_ÒbbhY`XUni `ZØ`fYbž`XUgg`gc`W`Y`G]hi Uh]cbYb`]b`Ni _i bZh`VYggYf
j cf`Yf[YgY`Yb`i bX`[Y`Ògh`k YfXYb`_ÒbbYb"

8YhU]`g

6Ygi W`Yb`G]Y`i bg`Ui Z.`b!U["XY